



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Art Unit	: 1742	Customer No.:	035811
Examiner	: Deborah Yee		
Serial No.	: 10/671,384		
Filed	: September 24, 2003	Docket No.:	1412-DIV-02
Inventors	: Yoshihiro Yazawa	Confirmation No.:	1865
	: Osamu Furukimi		
	: Yasushi Kato		
	: Yoshihiro Ozaki		
Title	: FERRITIC STAINLESS STEEL SHEET HAVING		
	: EXCELLENT DEEP-DRAWABILITY AND BRITTLE		
	: RESISTANCE TO SECONDARY PROCESSING		
	: AND METHOD FOR MAKING THE SAME		

DECLARATION OF YOSHIHIRO YAZAWA

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

I, Yoshihiro Yazawa, declare that I am one of the inventors named in the above-identified U.S. Patent Application, and that I am thoroughly familiar with the above referenced patent application and the invention described and claimed therein.

I entered Osaka University in 1982 and also studied at graduate school; took a master's degree; and entered Kawasaki Steel Corporation in 1988 and has been engaged since then in research of stainless steel.

I understand that the claims in this application have been rejected as being obvious over EP '685 individually or taken together with "admitted prior art" on pages 1-3 of the specification. To demonstrate the unexpected increase in toughness of steel sheets in the solicited claims by the addition of the claimed amount of vanadium, we took a steel sheet from the specification, namely steel A10, and compared it to another steel that contains an amount of vanadium outside of the claimed range. The attached absorbed energy versus temperature graph shows the dramatic and

unexpected increase in absorbed energy, which translates into increased toughness in the steel sheets by virtue of the inclusion of the claimed amount of vanadium. One skilled in the art would not expect this based on a fair reading of EP '685.

The undersigned declares that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and thus such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: November 8, 2005

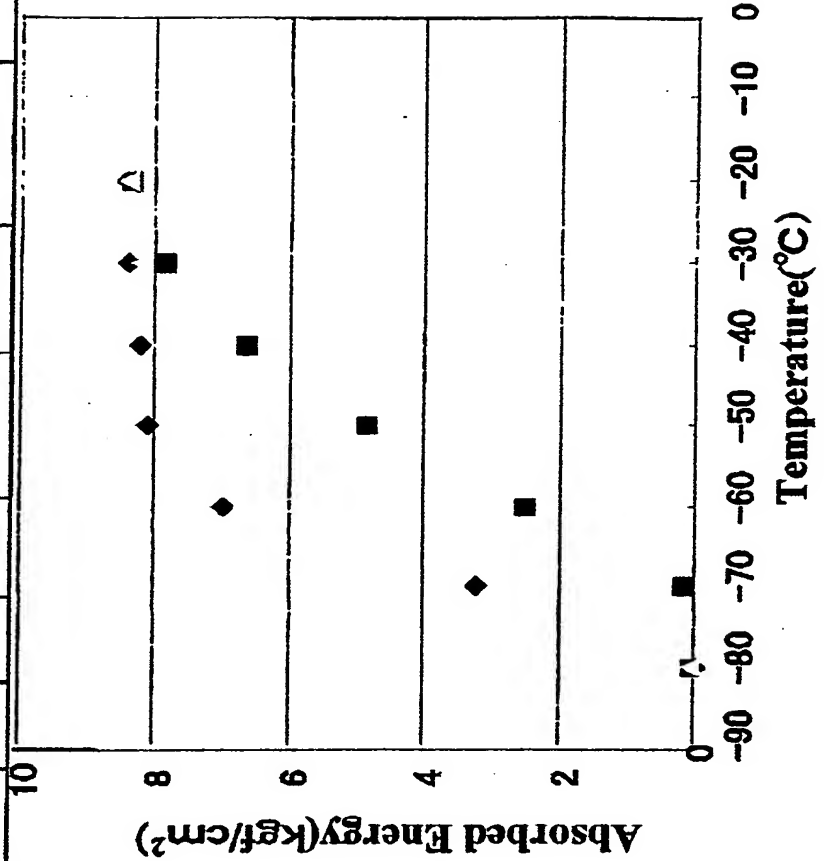
Yoshikuro Yazawa
Yoshikuro Yazawa, Co-inventor

Improvement of Toughness of Indispensable addition of B and V

Chemical Composition (mass%)



No.	C	Si	Mn	P	S	Cr	Al	Nb	Ti	N	B	V	Remarks	Ra (μ m)	Brittleness transition temperature ($^{\circ}$ C)
A10	0.005	0.101	0.14	0.025	0.005	18.1	0.004	0.0001	0.264	0.006	20ppm	0.0610	Invention	0.008	-65
Compar ative A	0.005	0.010	0.14	0.026	0.005	17.9	0.005	0.0001	0.250	0.006	20ppm	0.0001	C.E.	0.007	-55
Compar ative B	0.005	0.095	0.13	0.026	0.006	18.1	0.005	0.0001	0.250	0.006	20ppm	0.0060	Invention	0.007	-60



Absorbed Energy(kgf/cm 2)		
Tem pera ture ($^{\circ}$ C)	A10	Compar ative B
-80	0.010	0.0400
-70	3.230	0.1600
-60	6.980	2.5000
-50	8.100	4.8500
-40	8.230	6.6200
-30	8.400	7.8200
-20	8.420	8.3300